UNITED STATES PATENT AND TRADEMARK OFFICE

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901 New York Avenue
NW
Washington, DC 20001

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regional-desk@finnegan.com
Cindy.Baglietto@finnegan.com
Sherbonne'.Barnes-Anderson@finnegan.com

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte MIGUEL MELNYK, ROBERT KIDD,
JOSEPH SESTRICH, JEREMY TIDEMANN, KARTIK AYYAR,
FREDERICK KOOPMANS, and ANDREW PENNER

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Appeal 2016-000801
Application 12/580,212
Technology Center 2400

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Before JEFFREY S. SMITH, NABEEL U. KHAN, and
AARON W. MOORE, *Administrative Patent Judges.*

MOORE, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants[1] appeal under 35 U.S.C. § 134(a) from a Final Rejection of claims 1–4, 6–8, 10–16, 18, 19, and 21,[2] which are all of the pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

THE INVENTION

The application is directed to "methods and systems for budget encoding," which is "a technique to generate files in a media container format, having a frame index specifying a byte size and a byte offset for each media frame, within a real-time processing model." (Spec. ¶ 18.) Claim 1, reproduced below, is exemplary:

1. A method comprising:

   receiving streaming media data having a media frame and a frame index referencing the media frame;

   allocating a frame budget for an output media frame by estimating a frame size of the output media frame based on the frame index;

   generating the output media frame in real-time by processing the media frame based on first processing parameters;

   if the allocated frame budget is greater than a frame size of the processed media frame, padding the processed media frame;

   if the allocated frame budget is less than a frame size of the processed media frame, determining second processing parameters based on the frame budget and the first processing

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[1] Appellants identify Citrix Systems, Inc. as the real party in interest. (*See* App. Br. 2.)

[2] Claims 9, 20, and 22–31 were withdrawn as being drawn to a nonelected group. (*See* Final Act. 2.)

parameters, re-processing the media frame based on the second processing parameters and, if the allocated frame budget is greater than a frame size of the re-processed media frame, padding the re-processed media frame; and

> providing the output media frame.

THE REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Sugiyama	US 2004/0141732 A1	July 22, 2004
Neff et al.	US 2009/0232220 A1	Sept. 17, 2009
Zhou et al.	US 2010/0061448 A1	Mar. 11, 2010

THE REJECTIONS

1.   Claims 1–3, 8, 10–15, 19, and 21 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Neff and Zhou. (*See* Final Act. 2; Dec. 6, 2013 Non-Final Act. 2–8.)

2.   Claims 4, 6, 7, 16, and 18 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Neff, Zhou, and Sugiyama. (*See* Final Act. 2; Dec. 6, 2013 Non-Final Act. 8–9.)

3.   Claims 1–4, 6–8, 10–16, 18, 19, and 21 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Zhou and Neff. (*See* Final Act. 3; Dec. 6, 2013 Non-Final Act. 9–16.)

APPELLANTS' CONTENTIONS

Appellants argue the rejections are in error for the following reasons:

1. With respect to rejections 1 and 2 above, "*Neff* does not disclose any 'frame index' included in the received streaming media data, and *Neff* does not disclose estimating a frame size based on a received frame index." (App. Br. 9.)

2. With respect to rejection 3 above, "Zhou, alone or in combination with Neff, fails to disclose or suggest, at least, 'estimating a frame size of the output media frame based on the frame index [of the received streaming media data].'" (App. Br. 13, brackets in original.)

ANALYSIS

Neff teaches reformatting digital broadcast multimedia based on "Up-Front" parameters that "may be specific to a particular broadcast channel within the broadcast service, in which case the 'Up-Front' parameters may be available to the repackaging element 20 when the user of the mobile device 14 selects the broadcast channel for viewing." (Neff ¶ 61.) "The 'Up-Front' parameters may . . . have a 'videoSampleSize' parameter" which "may be a constant size to use for video samples in the file." (*Id.* ¶ 62.) "The 'videoSampleSize' parameter may be established as a value that may be larger than the size of the largest expected video frame" and "[v]ideo samples which may have a size smaller than the size of the largest expected video frame may be padded to the size of the largest expected video frame." (*Id.* ¶ 63; *see id.* ¶ 80.) If the incoming video sample is larger than the "videoSampleSize" parameter, the repackaging element 20 may truncate the

incoming video sample to correspond to the "videoSampleSize" parameter.
(*Id.* ¶ 83.)

The Examiner finds the claim 1 limitations "receiving streaming media data having a media frame and a frame index referencing the media frame" and "allocating a frame budget for an output media frame by estimating a frame size of the output media frame based on the frame index" in Neff, as follows:

> Neff discloses receiving streaming media data (e.g. Figs. 1, 5, Paragraph [0002, 0059, 0090]) having a media frame (e.g. Fig. 4 and Paragraph [0090]) and a frame index referencing the media frame (e.g. Paragraph [0106-0109]); allocating a frame budget (e.g. target frame size, see Figs. 6-10 and Paragraph [0032, 0091]) for an output media frame (e.g. Paragraph [0089, 0092]) by estimating a frame size of the output media frame based on the frame index (e.g. Figs. 6-10, Paragraph [0090-0093]).

(Ans. 16.) The Examiner further explains that "Paragraph [0108] of Neff describes 'H.264 bitstream syntax for individual frames', and herein 'the H.264 bitstream syntax or Up-Front Parameter' of Neff is considered as 'frame index referencing the media frame' as claimed" and that "these 'Up-Front' parameters are used to map a predetermined target frame size accordingly." (Ans. 16–17.)

Appellants reply that "the Examiner has not shown how *Neff's* Up-Front parameters include a frame index"; "the 'Up-Front metadata' in *Neff*, which is created based on the received Up-Front parameters, is not a 'frame index' that is 'received,'"; and "*Neff* does not disclose 'estimating a frame

size of the output media frame based on the [received] frame index.'"
(Reply Br. 3–6.[3])

We find Appellants' argument that the "Up-Front parameters" are not
"a frame index referencing the media frame" unpersuasive because it fails to
explain *why* that is not the case. We recognize that the Specification
describes, for example, a "media frame index that references each frame in
MP4 file 100 and specifies a frame size and a byte offset for each frame"
(Spec. ¶ 2), but the claims do not include such language and Appellants do
not argue that claimed media frame index is necessarily that limited.
Appellants have not provided sufficient argument or evidence for us to
conclude that the broadest reasonable construction of "a frame index
referencing the media frame" does not encompass Neff's Up-Front
parameters and, specifically, the "videoSampleSize" parameter, which "may
be a constant size to use for video samples in the file." (Neff ¶ 62.)

The argument that the Up-Front *metadata* is not "received" is not
persuasive because we agree with the Examiner that the Up-Front
parameters are, as the reference states that "[t]he repackaging element 20
may access the 'Up-Front' parameters associated with the audiovisual
content of the broadcast signal as generally shown at step 201." (Neff ¶ 61.)

We further agree that the output frames are "based on" the Up-Front
parameters, as "based on" is a very broad concept and the reference states

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[3] Appellants also assert that "the 'GOP frame pattern and target video
sample sizes' in Neff do not include 'frame size[s] of the output media
frame[s] [estimated] based on the [received] frame index." (Reply Br. 4.)
Because we agree with the Examiner that the frame sizes are "estimated"
based on the "videoSampleSize" parameter, this argument is moot.

that "[t]he 'videoSampleSize' parameter may be established as a value that may be larger than the size of the largest expected video frame" (Neff ¶ 63) and, as noted above, the video is padded or truncated to fit that size.

For these reasons, we sustain the Section 103(a) rejections of claims 1–4, 6–8, 10–16, 18, 19, and 21 over Neff in view of Zhou and Sugiyama. We do not reach the rejection of claims 1–4, 6–8, 10–16, 18, 19, and 21 over Zhou in view of Neff and Sugiyama. *See In re Hyon*, 679 F.3d 1363, 1367 (Fed. Cir. 2012) (affirmance of rejection of all claims under Section 103(a) made it unnecessary to reach other grounds of rejection); *Beloit Corp. v. Valmet Oy*, 742 F.2d 1421, 1423 (Fed. Cir. 1984).

DECISION

The rejections of claims 1–4, 6–8, 10–16, 18, 19, and 21 are affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED